

Feature Movement without Pied-Piping in the Overt Syntax

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Abstract

Chomsky (1995) proposes that all movement is in essence feature movement and that in overt syntax we find whole categories moved only because PF convergence requires pied-piping. However, in this paper it is proposed that the formal features of a lexical argument can also move in the overt syntax in some occasions, instead of only in covert syntax, as long as the feature movement does not cause any problems for PF convergence. We analyse three constructions as instances of feature movement without pied-piping in the overt syntax: first, the clitic doubling constructions in Spanish of the Río de la Plata, second, the constructions with an anaphoric clitic "se" in Spanish that duplicate the reflexive argument "a sí mismo", and finally, the wh-phrases *in situ* in Korean and Japanese.

Key words: feature movement, pied-piping, syntax.

Resum. El moviment de trets sense arrossegament a la sintaxi explícita

Chomsky (1995) proposa que tot trasllat és essencialment trasllat de trets i que en la sintaxi explícita trobem trasllat de categories només perquè la convergència a la forma fonètica requereixi trasllat amb arrossegament. Tot i així, en aquest article es proposa que els trets formals d'un argument lèxic es poden traslladar també a la sintaxi explícita en alguns casos, en lloc de fer-ho només a la sintaxi encoberta, sempre que el moviment de trets no causi cap problema per a la convergència amb la forma fonètica. S'analitzen tres construccions com a exemples de moviment de trets sense arrossegament a la sintaxi explícita: primer, construccions amb doblament de clític en castellà del Río de la Plata, segon, les construccions amb un clític anafòric "se" en castellà que dupliquen l'argument reflexiu "a sí mismo", i finalment, les interrogatives *in situ* en coreà i japonès.

Paraules clau: moviment de trets, arrossegament, sintaxi.

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1. Introduction

In this paper, we will propose that the formal features of lexical argument move in the overt syntax on some occasions (that we specify), instead of only in covert syntax. The one problem that this mechanism (move-F without pied-piping) raises is that of convergence in PF, since feature movement without pied-piping fails to preserve the phonetic integrity of the word. Chomsky (1995) proposes that all movement is in essence feature movement and that in overt syntax we find whole categories moved because PF convergence requires pied-piping. Nevertheless, in this paper we will defend the hypothesis that the formal features of a lexical phrase can be moved alone in overt syntax, as long as the feature movement does not cause any problem for convergence at PF. Having these ideas in mind, we will analyse three types of constructions as cases of formal features movement in the overt syntax. In the first place, we reanalyse the clitic doubling construction in Spanish of the Río de la Plata, suggesting that the formal features of DP (direct object) of this variety of Spanish are moved in the overt syntax and are materialized in the form of a clitic. Secondly, we apply our hypothesis of Move-F in overt syntax to constructions with an anaphoric clitic "se" in Spanish that obligatorily duplicate the reflexive argument "a sí mismo" (himself). Concretely, we propose that the obligatory presence of the reflexive clitic "se" should be attributed to the strong feature [+anaphoric] of V. Thirdly, we reinterpret the theory of overt raising of empty operators of the wh-phrases *in situ* in Japanese, developed by Watanabe (1992), as the cases of feature movement without pied-piping in the overt syntax. We'll propose that the wh-features of the wh-phrase *in situ* of the Korean or Japanese, raised overtly to the COMP [+wh] to check the strong wh-feature of COMP, are materialized in the form of interrogative morpheme 'ni' or 'ka' in Korean and Japanese, respectively. Finally, we address some problems that our ideas raise for convergence at PF.

2. The clitic doubling construction

2.1. Previous Analyses

In the generative literature, there are three hypotheses about the nature of clitics: clitics as verbal affixes clitics as Agr head, and clitics as determiners. We'll assume in this paper (a version of) the clitics as determiner hypothesis for the direct object clitics in Spanish.¹ Taking into account this basic assumption, we approach now the clitic doubling construction:

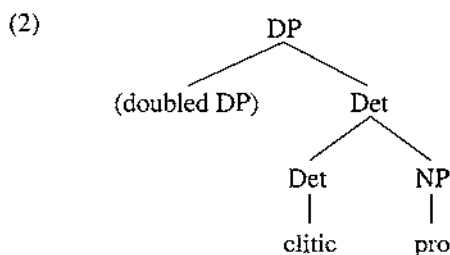
- (1) Lo_i vimos a Juan_i. (Spanish of the Río de la Plata)
 him(ACC) saw John
 'We saw John.'

In (1), we find a direct object clitic and a DP argument co-occurring. Because of this, some linguists have proposed that the DO clitics are generated as verb affixes

1. As arguments for the determiner hypothesis of clitics, Roca (1995) presents a series of morphological and semantic similarities between DO clitics and determiners (definite article).

(cf. Aoun (1981), Jaeggli (1982), Borer (1984)), or as a Agr head (cf. Suñer (1988), Fernández Soriano (1993), Franco (1991), Mendikoetxea (1993)), rejecting the idea that the clitics are base-generated in argument position, from where they cliticize to the verb (cf. Kayne (1975)). Even though the movement analysis of clitics can explain the complementary distribution between the DO clitic and the DO lexical argument DP in French, such hypothesis is faced with the following problems raised by the clitic doubling construction in (1): in the first place, how can the DO clitic as well as the DP argument be generated in the same argument position?; in the second place, how are the clitic and the lexical DP linked? (i.e. how do they share their grammatical features?)

Some linguists have tried to solve the above-mentioned problem in the clitic doubling construction with «the determiner hypothesis of clitics». In what follows, we'll briefly present their proposals. If it is assumed that the DO clitic is generated in the argument position as the D^0 head, one has to design a DP structure headed by the clitic in which there is sufficient structure space for the two elements at the same time: the clitic (D^0) and the lexical doubled DP. Authors such as Torrego (1992), Uriagereka (1995) and Roca (1995) have proposed the following structure for the clitic doubled DP (the structure is taken from Uriagereka (1995:81)):

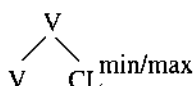


In (2), the feature agreement between the clitic and the doubled DP is achieved by spec-head agreement. In this configuration of DP, the clitics, independently of the presence of doubled DP, have all the same syntactic nature, that is to say, they are all generated in an argument position as Det^0 head of DP.

However, the DP structure in (2) for the clitic doubling construction faces some problems, if we follow the ideas in Chomsky (1994). Chomsky (1994) supposes that in a «bare phrase structure» theory, an item can be both an X^0 and an XP. As a possible illustration, Chomsky mentions clitics, because he assumes that a clitic (Determiner under the DP hypothesis) raises from its θ -position and attaches to an inflectional head. In its θ -position, the clitic is an XP; attachment to a head requires that it be an X^0 . We adopt this idea on clitics that don't have a doubled DP.² Then, the DP structure in (2) faces a contradiction with our ideas on the argumental clitics: clitics are merged with verb as «minimal» and «maximal» categories at the same time. This idea is shown in (3):

2. As we'll see, we intend to differentiate the two kinds of clitics; argumental clitics that do not have a doubled DP, in examples such as 'Juan lo vio' (John saw him), and non-argumental clitics that doubles a DP (cf. (1)).

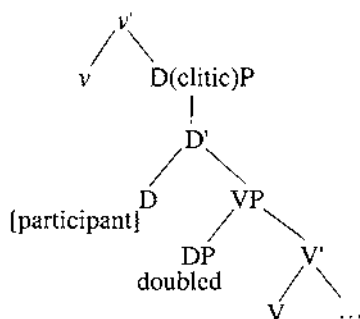
(3)



However, in the structure of (2), it is supposed that the head Det^0 (clitic) projects, so that the clitic is only “minimal” and not “maximal”. A second problem with (2) is that the configuration of DP in (2) does not explain in a simple way how the formal features (for example, a Case feature) of the doubled DP are checked. The relationship of Spec and Head isn’t enough to guarantee feature checking. The spec-head agreement in (2) only reflects a coindexing between the two elements, but it is not sufficient to explain the morphological feature checking of the doubled DP argument: the feature checking must always be produced in the checking domain of a target (cf. Chomsky (1995)). As we see, a clitic can not be a target that can attract and check the formal features of an argument DP. For such reasons, we think, along the lines of Torrego (1994), that the argument position is occupied by the doubled DP and not by the clitic, and that the clitic that doubles a DP is different from the argumental clitics that move in the overt syntax from their base-generated position (in constructions without a doubled DP). Concretely, Torrego (1994) presents the following structure for the clitic doubling construction:

- (4) a. Lo empujaron a Juan.
 him(ACC) pushed John
 ‘They pushed John.’

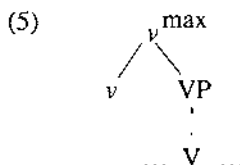
b.



As we observe in (4b), Torrego (1994) supposes that a light verb can select a functional head Det^0 , located between the two VPs, and that the doubled DP is an argument object located in the lower VP. According to Torrego, there exists a semantic restriction on the doubled DP, which plays an important role in the selection of the functional head Det^0 by the light verb: animacy and specificity. Thus, it is proposed that the animacy is specified as a morphological feature in the definite determiner, which is what makes doubling possible in a clitic doubling construction. Therefore, Torrego assumes that the functional head D selected by

a light verb possesses a [+participant] feature, which limits the doubling of clitics to the animate DP.

We agree with Torrego (1994) that the clitic that doubles a lexical DP is not an argument and the argument position is occupied by the doubled DP. Consequently, the only clitics that are generated in argument position are those which do not double a lexical DP. However, we disagree with Torrego regarding the question of whether a light verb can select a functional head D in the clitic doubling construction. Following Chomsky (1995:315-316), we suppose that the functional categories can not be projected within the lexical categories, in this case, between the light verb and its complement VP. Chomsky (1995) supposes that θ -relatedness is a «base property» (restricted to configurations of lexical insertion), complementary to feature checking, which is a property of movement. So, we'll assume a v -VP configuration as the expression of θ -relatedness: there can be no functional categories intervening between the light verb v and its VP complement in (5):



Therefore, we do not accept the idea that a light verb can select a functional category D. Besides this, we think that there must be an independent motivation for Def^0 to select a VP. On the other hand, as we can see in the examples of (6) and (7), the clitic doubling construction has a specificity constraint on the doubled DP. The crucial semantic restriction on the doubled DP is not animacy, but specificity, as indicated in Suñer (1988:396-400):³

- (6) a. (*Lo) alabarán al niño que termine primero.
 him(ACC) praise-3.pl.FUT the boy that finish.SUBJ first
 [+anim, -spec, (+def)]
 'They will praise the boy that would finish first.'
- b. Diariamente, la escuchaba a una mujer que cantaba tangos.
 Daily her(ACC) listened.3.sg. a woman that sang.IND
 [+anim, +spec, (-def)]
 tango
 'Daily, he listened to a woman that sang tango.'

3. Following the idea of Suñer (1988), we think that the preposition 'a' in the doubled DP is not a Case marker, but rather a 'animacy' or 'distinction' marker. We do not accept the idea of Borer (1984) that the doubling clitics are possible only when the doubled DP can receive Case from the preposition 'a'.

- (7) a. Yo **la** tenía prevista **esta muerte** [-anim, +spec]
 I it(ACC) had forseen this death
 'I had forseen this death.'
- b. Yo **lo** voy a comprar **el diario** justo antes de subir.
 I it(ACC) go to buy the diary just before go up
 [-anim, +spec]
 'I will buy the diary just before going up.'

As we see in (7), though the DPs have a semantic interpretation [-anim, +spec], it is possible to have the object clitics that double them. Thus, it seems that the relevant semantic feature in the clitic doubling construction is that of specificity.

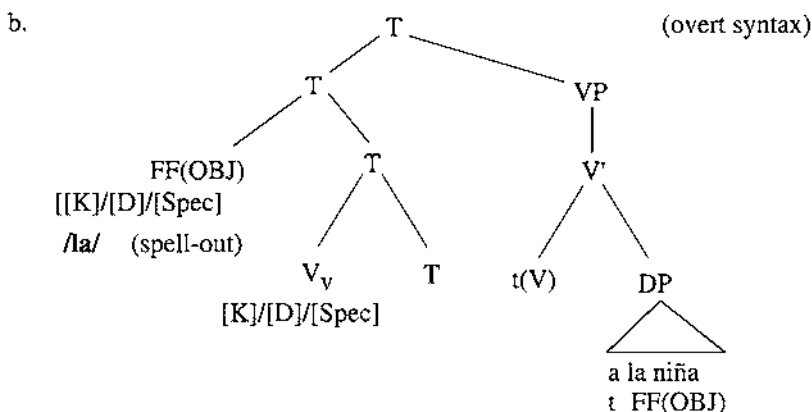
2.2. An alternative proposal

In this section, we will propose an alternative (within the Det hypothesis of clitics) that resolves the above-mentioned problems: the generation of the clitics and the doubled DP in the same position and the feature coindexing between the two elements. Our hypothesis, we think, is minimalist in its spirit and consists, basically, in extending the feature movement mechanism to the clitic doubling construction. Before entering into the details of our proposal, we review the idea of Borer (1984), formulated within GB model, that the clitics in general are the materialization of the Case feature of the verb, since our proposal about the nature of doubling clitics, within Minimalist Program, will follow certain leading ideas of Borer. Borer (1984), the classical approach to the 'Affix Hypothesis' of clitics, arrives at the following main conclusions: (a) clitics, as verbal affix, are the materialization of the Case properties of the verb; (b) the argument position is filled by a lexical or null NP; (c) the clitics and the argument NP must be coindexed under government. Borer assumes that the DO clitics 'absorb' the accusative Case of the verb; as consequence, the doubled DP must appear governed by a preposition 'a' that can assign Case to DP (but see the note 3 on this matter). Thus, Borer supposes that the clitics are the results of the absorption ('spell-out') of verb Case feature.

The question that stems from the ideas of Borer is that, if the 'government' concept does not play any role in the Minimalist Program, how can we obtain the coindexing between the clitics and the doubled DP? In order to answer this question, we assume first that the features of clitics belong to the formal features of the doubled DP. So, we propose that the formal features (Case, D and phi feature) of doubled DP in the argument position are moved in the overt syntax to the complex head V+T, formed by the adjunction of the verb to T, and are 'spelled-out' in a clitic form after the feature checking process with the target V. The following tree structure shows our ideas on the nature of the DO clitics that doubles the argument DP ([K] means the Case feature and [D] is categorial feature of determiner):⁴

4. In order to account for the role of the "specificity" constraint in clitic doubling constructions, we have added to the verb itself a specificity feature that has to be checked with the [+spec] feature of the doubled DP.

- (8) a. La empujaron a la niña.
 her(ACC) pushed the girl
 'They pushed the girl'



As we see in (8b), we propose that the doubling clitic is not generated in the argument position of DO; this position is occupied by the doubled DP and the DO clitic is a mere 'spell-out' (lexical realization) of the formal features of DP argument which have been checked in the overt syntax with the features of verb, adjoined to T.⁵ In conclusion, the structure (8b) shows that the formal features of a lexical argument have been 'separated' and are adjoined to T in the overt syntax. In (8b), we suppose that the feature movement takes place in the overt syntax because of the strong D-feature added to verb.⁶ (On the problem of the overt feature raising without pied-piping, see the last part of this paper).

5. In (8b), we have allowed multiple adjunction to Tense, which does not follow the constraints on adjunction proposed by Kayne (1994).
 6. As we will see in section 4 in this paper, we suppose that a language that has DO clitics will opt for the overt feature movement to check the "strong" D-feature of verb, instead of forcing overt DP-raising (object shift), because the feature movement is more economical than Move- α . Then, we can have the following question, as an anonymous reviewer points out: if this kind of movement is more economical, why isn't it more usual? In effect, the clitic doubling construction is found only in Spanish of the Río de la Plata, not in standard Spanish. We suppose that the D-feature of verb in standard Spanish is "weak" (we can't find direct evidence in favor of the object shift in this language), so, the feature movement of the DP argument takes place in the "covert syntax". As a result, in general, it is not usual to have the clitic doubling constructions in standard Spanish; i.e., we find only the DP argument as in (i).
- (i) Juan vio al niño. (standard Spanish)
 John saw.3.sg. the boy
 'John saw the boy.'

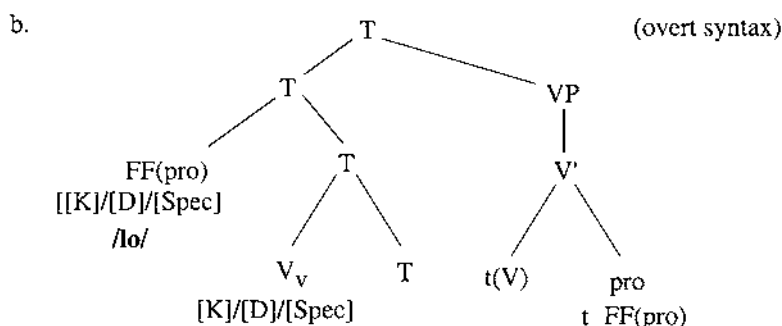
So, we predict that if a language (that has DO clitics) has a strong D-feature added to verb, this language will have the clitic doubling constructions.

In our opinion, this conception of DO clitics in the doubling structure as the 'spell-out' of the formal features of the doubled DP resolves, in a simple way, the problems that the movement hypothesis of clitics faces in the clitic doubling construction. In the first place, there is no competition between lexical DP and clitic to occupy the same position, since only the lexical DP is generated by 'merge' in an argument position, and its own formal features are spelled-out as DO clitic in the overt syntax. In the second place, the 'coindexing' between the clitic and the doubled DP is explained directly if we suppose that the formal features of the lexical phrase, moved in the overt syntax and spelled-out as clitic, are precisely the same formal features that the doubled DP possesses.

Our hypothesis does not face the problems which arise in proposals about the clitic doubling construction that make use of the determiner hypothesis of the clitics. In the first place, we treat doubling clitics in a different way from argumental clitics (these clitics are generated in an argument position and they are minimal and maximal projection at the same time). In this way, we do not have to postulate a specific DP structures for the clitic doubling construction. In the second place, our proposal, couched in the 'theory of Move-F' of Chomsky (1995), provides a simpler way of expressing the identity of formal features between the clitic and the doubled DP, without resorting to the 'Spec-Head agreement' mechanism in the DP hypothesis of clitics (cf. (2)); i.e., simply, the formal features of doubled DP are realized as clitic. Finally, we do not need to postulate the existence of an intervening DP functional category (to locate the DO clitic) between a light verb and the VP where the lexical doubled DP is located (cf. Torrego (1994)).

Our analysis about the nature of DO clitics in Spanish, as we have mentioned above, is non-unitary, because we propose that the DO clitics in the construction without a doubled DP are base-generated (cf. (3)) and the clitics in the clitic doubling constructions are derived (spelled-out in PF (cf. (8b))). To design a unitary analysis for clitics, perhaps it would be better to suppose that, in examples such as 'Juan *lo* vio' (John saw him), the DO clitic also results from the raising of the formal features of argument "pro". The following tree structure shows this idea:

- (9) a. Lo vimos.
him(ACC) saw.1.pl.
'We saw him.'

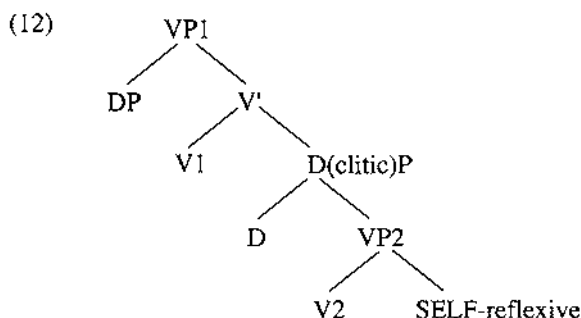


case, as opposed to the clitic doubling construction we have examined in the previous section, the presence of anaphoric clitic 'se' is obligatory. The question which we will have to answer in this section is the following: why is the presence of the clitics that duplicate the DP in the reflexive 'se' construction obligatory as we see in (11)?

- (11) María *(se) mira a sí misma.
 Mary (anaphoric clitic) see herself
 'Mary sees herself.'

We will see that the reflexive 'se' clitic doubling construction in Spanish (cf. (11)) constitutes evidence in favor of our hypothesis of formal feature movement in the overt syntax. Our proposal takes, as a starting point, the analysis of Torrego (1995).

Adopting the ideas of Lebeaux (1983) and Chomsky (1986) that anaphors moves in LF to INFL, Torrego (1995) proposes that the English sentence 'John sees himself' and the Spanish 'Juan se mira' have identical LFs. In contrast, the following two sentences of these languages, 'John sees himself' and 'Juan se mira a sí mismo' have different syntactic representations prior to LF, but have identical LFs since the SELF reflexive 'a sí mismo' of (11) must undergo LF movement to INFL, as it does in English. Torrego (1995) proposes the following structure for (11):



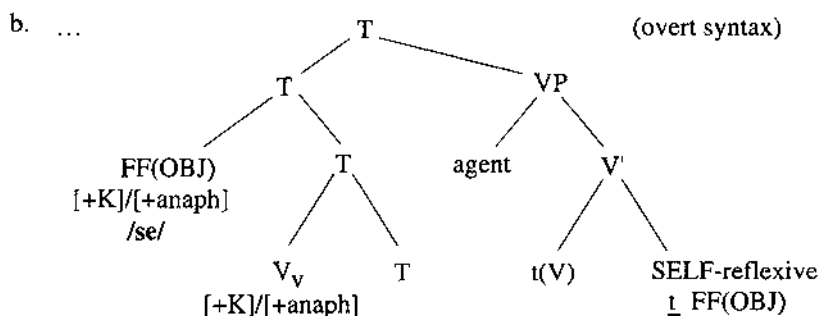
Torrego assumes that the SELF-reflexive is underspecified for phi-features, and that the null D in (12) is a full pronominal. She claims that null D is not an option with strong anaphors (SELF-reflexives) because anaphors, due to their underspecification in phi-features, cannot check off the features of a fully specified pronominal. For this reason, Torrego supposes that, in a Spanish SELF-reflexive construction such as (11), the Det head (pronominal inflection) in (12) can not be null.

Since we have not adopted (12) as the structure for the clitic doubling construction, we can not attribute the obligatory presence of anaphoric clitic 'se' in Spanish to the syntactic nature of the pronoun Det, nor to the fact that the phi-features of the reflexive argument 'a sí mismo' are underspecified. Our hypothesis was that the clitics that double the lexical arguments are the 'spell-out' of the

moved formal features of the argument in the overt syntax. The question that we should answer now is the following: why is the anaphoric clitic 'se' that doubles the SELF-reflexive argument obligatory in Spanish?

Let us adopt the idea of Chomsky (1995) that the anaphor DP in English must check its anaphoric feature with a functional head INFL [+anaphoric] through the formal feature movement in covert syntax. Having this idea in mind, we propose that the obligatory materialization of the anaphoric clitic that duplicates the SELF-reflexive in Spanish is due to the strong anaphoric feature of the target-head V; in contrast, this feature in English will be weak. In order to check overtly the strong feature of target, the anaphoric feature of the SELF-reflexive argument in Spanish has to be moved in the overt syntax: if this process is not accomplished in the overt syntax, the derivation will crash due to the fact that the strong anaphoric feature of V in Spanish can not be interpreted in PF. In this process, we suppose that the formal features of the reflexive argument can be moved in the overt syntax without violating the convergence condition in PF. Consequently, we think, as opposed to the ideas of Torrego (1995), that there will not be no feature movement of the SELF-reflexive argument in covert syntax, since the anaphoric feature and the accusative Case feature of this lexical argument already have been checked in the overt syntax with the [+anaphoric] and [+Case] features of the target-head V, within the functional head T projection. These ideas appear illustrated in the following structure:

- (13) a. Juan se critica a sí mismo.
 John CL criticize himself
 'John criticizes himself.'



As we observe in (13b), we suppose that the formal features of the SELF-reflexive argument are adjoined to the complex head V+T in the overt syntax to check the strong [+anaphoric] feature of target-head V, adjoined to T. These formal features of reflexive argument, when they are checked with the verb features, are spelled-out in the form of anaphoric clitic 'se'. In fact, the obligatory presence of the anaphoric clitic 'se' in (13a), we think, is narrowly related to the strong [+anaphoric] V feature, since this anaphoric clitic, as Torrego (1995) indicates, only appears with the SELF-reflexives that are the verb complements (cf. (14a)) as opposed to adjuncts (cf. (14b)):

- (14) a. María *(se) mira a sí misma.
 María CL see.3.sg. herself
 'Mary sees herself.'
- b. María (*se) tiene ante sí un problema difícil.
 María CL has in front-of her a difficult problem
 'Mary has a difficult problem before herself.'

In sentences such as (14), we can see that the explicit movement of the formal features of the SELF reflexive argument is restricted to those contexts in which the reflexive argument is the direct object of the verb. Therefore, we believe that the supposition that the head verb has the strong anaphoric feature in Spanish receives confirmation.⁸

We have proposed in this section that the anaphoric clitic 'se' in Spanish that doubles a SELF-reflexive argument can be another case of formal feature movement in the overt syntax: the clitic 'se' would be the overt 'spell-out' of the moved formal features of a lexical argument.

4. Wh-phrases in situ in Korean and Japanese

In this section, we'll reformulate the ideas of Watanabe (1992) on the wh-phrases *in situ* in Japanese (we'll extend to Korean), in order to provide additional support for our hypothesis that the formal features, separated from the phonetic (spell-out) and semantic features, can move by itself in overt syntax to enter into checking relation with the target-head that attracts them. According to Watanabe (1992), in the wh-phrase *in situ* constructions in Japanese, there is an empty wh-operator movement in the overt syntax. From the point of view of the minimalist program, Chomsky (1992) reinterprets this idea in the following way: the Comp feature [+wh] is universally strong. The reason why, in languages like Japanese or Korean, the overt movement of wh-phrase is not produced, in contrast to what occurs in languages such as English, has been attributed to the fact that the wh-phrases of those languages possess different morphological properties from those of the English wh-phrases (cf. Kim (1989)): the wh-phrases of Korean and Japanese are quantifiers.⁹

In principle, we'll assume that, unless the convergence condition in PF is violated, it will be possible to have wh-feature movement in overt syntax (the empty operator movement in the sense of Watanabe (1992)). If this is the case, what

8. One question that arises at this point is the following: if the anaphoric feature of verb is strong in Spanish, why doesn't the whole reflexive phrase move in the overt syntax, as in '*Juan a sí mismo critica'? We believe that languages that have the materialization process of the formal features in the overt syntax, as clitics that double the lexical DP argument in Spanish, opt for the mechanism of formal feature movement without pied-piping in the overt syntax (to check off a strong feature of a target-head), since the feature movement is generally more economical than the movement of the whole phrase. See section 5 of this paper for more details.
9. What could be deduced from this supposition is that, in order for exclusive feature movement to be possible in overt syntax, these features will have to be linked with an empty morpheme without phonetic content, as in the case of Korean wh-phrases (cf. personal communication with J.

is moved overtly in such languages would be the *wh*-features, separated from the lexical *wh*-phrases. As our hypothesis predicts, when feature movement takes place in overt syntax, a materialization process is expected, in this case, the spell-out of the *wh*-features of the *wh*-phrases *in situ* in Korean and Japanese, as a result of checking relation with the target-head Comp [+*wh*]. In effect, we think that there exists a test that confirms our supposition, since we consider the interrogative morpheme 'ni' in Korean or 'ka' in Japanese to be the spell-out of the *wh*-features of the *wh*-phrases *in situ* of these languages. Let's see the following examples:

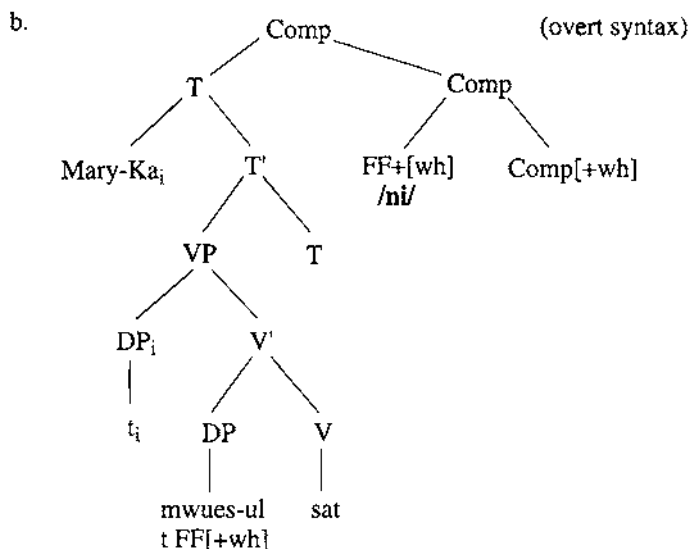
- (15) a. Mary-ka **mwues-ul** sat *(ni)? (Korean)
 Mary-nom what-acc bought (Q)
 'What did Mary buy?'
 b. John-wa Mary-ga **nani-o** katta to itta *(ka)? (Japanese)
 John-top Mary-nom what-acc bought Comp said (Q)
 'What did John say that Mary bought?'
 (16) Mary-ka **mwues-ul** sat ta. (Korean)
 nom what/something bought Ind
 a. Mary bought something.
 b. *What did Mary buy? (Kim, 1989: 120)

As we can see in (15), the sentences with the *wh*-phrases *in situ* in Japanese and in Korean carry an interrogative morpheme ('ni' in Korean and 'ka' in Japanese). Furthermore, there exists another interesting data; as we see in the Korean example (16), if the sentence possesses an indicative modal morpheme 'ta', the phrase 'mwues' is interpreted as a quantifier 'something' and not as a *wh*-phrase 'what'. From these, we deduce that the *wh*-feature of the *wh*-phrase *in situ* has moved overtly to the head Comp [+*wh*] to enter into a checking relation with an interrogative Comp, being materialized as an interrogative morpheme 'ni' and 'ka' in Korean and in Japanese, respectively.¹⁰ This idea is shown in (17):

Uriagereka). However, we'll not adopt this position in the present work, since, in the clitic doubling construction in Spanish, we always find a determiner morpheme with phonetic content in the doubled DP. Our hypothesis is based on the idea that it is possible to have formal feature movement in overt syntax, though these features are linked with phonetically realized morpheme within the lexical DP, under the condition that these features are overtly materialized in a lexical morpheme, that is to say, under the condition that this derivation converges in PF (see our final reflections in section 5).

10. Korean sentences always carry a mood morpheme with which one can identify the mood of the sentences: 'ta', 'ra' and 'ni' represent the indicative, imperative and interrogative moods, respectively. In this paper, we consider these morphemes as the 'spell-out' of the mood features of the sentences in overt syntax that enter into a checking relation with the morphological mood features in Comp. In any case, we don't think that these mood morphemes of the sentence are generated in the Comp head.

- (17) a. Mary-ka mwues-ul sat *(ni) ?
 Mary-nom what-acc bought Q
 'What did Mary buy?'



As we see in (17b), the wh-feature of the wh-phrase, corresponding to the empty operator in the sense of Watanabe (1992), *in situ* in Korean has overtly raised to the target-head Comp, whose wh-operator feature we assume is strong. After being checked overtly with the target [+wh] feature, the wh-feature of such phrase is materialized in an interrogative morpheme 'ni'. Since we assume that the morphological features do not move as a category, independently of the fact that this derivation is accomplished in the overt syntax or in the covert syntax, we have supposed that the wh-feature of the wh-phrases in this language are not moved to [Spec, CP] position, but are adjoined to the head Comp, leaving the lexical phrase *in situ*. If we take into account the fact that the interrogative sentences of the English and of the Spanish that show overt wh movement do not possess any interrogative morpheme in Comp, it seems that perhaps we are in the right direction, when we suppose that the interrogative morpheme 'ni' and 'ka' are not generated in Comp, but they are a mere reflection of the materialization of the wh-feature of the wh-phrases *in situ*. Thus, the functional heads will be specified only with the appropriate morphological features, as the minimalist program supposes; in this case, the head Comp in the interrogative sentence is specified with the wh-feature.

Since in English and Spanish the wh-feature of the wh-phrases does not move alone, but all the category moves to the [Spec, CP] position by pied-piping in the overt syntax, we do not expect a materialization process of the wh-feature in these languages. According to our hypothesis, this process will be observed only when the formal features, separated from the lexical argument, move in overt syntax.

5. Feature movement without pied-piping in overt syntax and convergence at PF

As we have mentioned previously, Chomsky (1995) supposes that feature movement will be applied only in the covert syntax and that, in the overt syntax, the whole phrase has to move so as not to violate the convergence condition at PF. According to Chomsky (1995), a lexical item presented in the numeration possesses three types of features: the phonetic features matrix, the semantic features matrix and the formal features matrix. Chomsky thinks that the formal feature movement in the overt syntax induces the pied-piping of these three types of feature matrix in order to obtain convergence in PF: the movement of a lexical item in the overt syntax. After spell-out (i.e., in covert syntax), since the phonetic feature matrix has already been separated from the rest of the feature set of the lexical item, the phonetic component is no longer relevant in formal feature movement in covert syntax: thus we have Move-F without pied-piping in covert syntax. On the other hand, in the Minimalist Program of Chomsky (1995), it is supposed that in the course of the computation from numeration to LF, the following two conditions must be satisfied: the Uniformity Condition and the Inclusiveness Condition. According to the second condition, no new object can be included in the course of the computation, that is to say, only the rearrangement of the lexical items given in the numeration is permitted. In contrast, the derivation from the numeration to PF is 'not uniform' and 'not inclusive': in this derivation, there will be different operations from those of the computational component and new objects not present in the numeration can be introduced.

Our hypothesis of formal feature movement without pied-piping in overt syntax and its lexical materialization seem to contradict (in principle) the first of these suppositions, but observes the second since the inclusiveness condition is not relevant in the course from N(umeration) to PF. The materialization of formal features, moved in the overt syntax, as a clitic or an interrogative morpheme implies the inclusion of a new object that was not in the numeration. However, this is perfectly possible: in natural languages, we can find many cases of purely morphological material inclusion for reasons of pure morphological formation.¹¹ With respect to the first problem mentioned above, we believe, in principle, that if the convergence condition in PF is satisfied, it is possible to have formal feature movement in overt syntax.¹² We have to take into account a basic idea of Move-F: the movement is motivated by morphological considerations, that is, by the target's morphological feature checking requirement. According to this principle, a 'minimal' operation would be formal feature movement without pied-piping. If we consider that what prevents the exclusive feature movement in the overt syntax is only a property of the phonetic component, we can formulate the following hypothesis:

11. Since, in PF, it is possible to have the modification of forms or the internal structures already present in a lexical item by means of special rules at this level (cf. distributed Morphology of Halle and Marantz (1995)), the uniformity and inclusiveness conditions are not applied in the course of derivation from N to PF (cf. Chomsky (1995:228-229)). If our ideas on feature materialization in the overt syntax are well supported, these phenomena would constitute evidence in favor of 'late lexical insertion in postsyntax' (cf. v.g., Halle and Marantz, 1993).
12. Chomsky (1995:264 and note 40) does not seem to discard, in principle, this possibility.

if the derivation does not crash in PF, it is possible to have an overt feature movement without pied-piping. In such a case, we expect that the formal features moved overtly become materialized in a lexical morpheme. The phonetic features of the lexical item will be spelled-out *in situ* in its non-derived position, without constituting any problem for convergence at PF. This hypothesis is the one which we have maintained throughout this work.

In short, the reason why move-F in overt syntax requires pied-piping process is to achieve convergence at PF. If the exclusive movement of formal features in overt syntax can converge at PF through its phonetic materialization (and the lexical phrase converges in PF *in situ* in its base position), we do not see any impediment to the proposal of formal feature movement without pied-piping in overt syntax. We raise below, nevertheless, a series of relevant questions, related to move-F without pied-piping in overt syntax, to which we have not given a precise answer: in the first place, why does this mechanism exist?; in the second place, under what conditions can this operation be carried out?; in the third place, what does the formal features materialization consist in? and, finally, if we introduce this mechanism in the computational derivation, what predictions can we make?

We begin to answer the first question: why does the (only) formal features matrix move in the overt syntax? Our response with respect to this question is the following: to check a 'strong' feature of a target-head, only the formal features move in overt syntax (provided that this derivation observes the PF convergence condition), since this mechanism is in favor of the general supposition within the minimalist framework of Chomsky (1995) that, if only the formal features (and not the semantic features) participate in the feature checking process, it is more 'economical' to move only the formal features than to move the whole category. According to what we have proposed in this paper, the obligatory presence of the anaphoric clitic 'se' in Spanish that duplicates the reflexive argument 'a sí mismo' is due to the strong anaphoric feature of verb in this language. Equally, the obligatory presence of the interrogative morpheme 'ni' or 'ka', linked with the wh-phrases *in situ*, is also attributed to the strong wh-feature of Comp. In these cases, only the formal features are moved in the overt syntax in order to check off (to eliminate) the 'strong' feature of the target-head, since this mechanism is more economical than the whole phrase movement. In the case of clitic that doubles the DP in Spanish of the Río de la Plata, we suppose that the verb in this variety of Spanish can possess not only 'strong' but also 'weak' D feature: [+/- strong]. When the nominal feature D of the verb in such language is strong, the exclusive movement of the formal features of the DP is produced in overt syntax: the moved features are materialized explicitly in the form of DO clitic ('*lo_i empujaron al niño_i*'). If the nominal D feature of the verb is weak, the formal features of the direct object DP will be moved in the covert syntax, satisfying thus the Procrastinate Principle: in this case, we do not obtain the presence of clitic ('*empujaron al niño*'). In this way, we try to explain the 'optionality' of the clitic in clitic doubling constructions of the Spanish of the Río de la Plata region. Since, in standard Spanish, the nominal feature D of the verb is always weak, this language does not have the clitic doubling construction phenomenon (cf. note 6).

We will answer, below, the second question that we have raised: when does this mechanism occur? Our hypothesis regarding this issue is that, provided that the

convergence condition in PF is not violated, it is possible to have this formal features movement in overt syntax. In other words, if the features moved in the overt syntax can be materialized in a clitic or in an interrogative morpheme, it will be possible to have exclusive feature movement in the overt syntax to check the strong feature of a target-head. In languages that do not possess this process, the whole phrase has to move in the overt syntax to check a strong feature of the target.

Now, we may answer the third question: what does the materialization of the moved formal features consist in? Certainly, feature checking implies the elimination of the non interpretable features. The problem is that, if the formal features moved in the overt syntax have been checked with the features of target-head and, as a result, if the non interpretable features (between the moved features) have been eliminated (crased), how can a DO clitic be inserted postsyntactically (late insertion) as a materialization of the formal features ([+D], [+K], [+Spec] and phi-features) of the argument DP (concretely, the non interpretable Case feature of DP would have been eliminated in the overt checking process)? The solution to this problem resides, in our opinion, in the way in which the feature checking and the late lexical insertion are combined. We are adopting, for the cases that we are concerned with, the 'late lexical insertion' model, that is, a model for which the 'spell-out' does not consist of the 'separation of the phonetic features', since, from this point of view, there is no phonetic features in syntax (phonetic features are inserted in the last stage of the Morphological Postsyntactic Component that mediate between the Computational Component and the PF: cf. Halle and Marantz (1993)). Therefore, 'spell-out' in this model consists of the formal features following two different routes: on the one hand, they enter unchanged into the Morphological Component (to receive finally a phonetic realization); on the other hand, they establish the checking relation (and are erased if they are not interpretable) in the Computational Component. The basic idea would be that the formal features moved in the overt syntax should be materialized to be able to converge at PF. Therefore, there would be exclusive feature movement in the overt syntax in those languages that have the lexical morphemes that can materialize these moved formal features.

Finally, we answer our last question: what predictions are established if this new mechanism is introduced in the computational derivation? Our hypothesis on exclusive feature movement in the overt syntax predicts the following: on the one hand, the languages that have overt DO movement will not have clitics, as in Irish or Welsh. On the contrary, the languages that have DO clitics will not have a movement of DO argument in the overt syntax. (Let's recall our supposition that, if a language has the materialization process in the form of clitics (and thus it does not violate the convergence condition in PF), such language will opt for the exclusive features movement in the overt syntax to check off the strong nominal feature D of the verb, since this mechanism is more 'economical' than the movement of the whole phrase). On the other hand, languages with interrogative wh-morpheme will not have wh-phrase movement, as in Korean and Japanese. On the contrary, languages with overt wh-phrase movement will not have an interrogative wh-morpheme, as in English or in Spanish. In other words, if a language has a materialization process of the wh-features in a form of interrogative morpheme,

such language will opt for the exclusive wh-feature movement in the overt syntax to check the strong wh-feature of the target-head Comp, instead of moving the entire wh-phrase to the [Spec, CP] position.

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